

A minute Hymenopteron *Aspidiotiphagus Schoeversi* n. sp.

by

C. A. L. SMITS VAN BURGST, (The Hague).

(Plate 13).

In „Entomologische Berichten” of November 1914 I gave a description of an almost invisible new hymenopterous insect named *Litus nigriceps* and belonging to the subfamily *Mymarinae*. Two specimens of this new species, ♀ and ♂, were issued from insecteggs, probably from the eggs of some *Homopteron*, at the laboratory of the Phytopathological Institute at Wageningen.

In September of the same year 16 specimens of an other very minute *Hymenopteron* were bred at the laboratory afore-said from ♂♂ of *Chionaspis aspidistrae*. The host, from which the parasites were issued through circular holes, cut through their elliptically shaped white scales, was discovered in a greenhouse at Gouda on a leaf of *Aspidistra*.

Both species, above mentioned, were reared by Mr. T. SCHOEVERS, assistant of Prof. J. RITZEMA BOS, director of the Institute afore named. Their representants belong to the smallest insects known, being not quite one third of a millimeter in length. Insects of this group are sometimes observed on the surface of windows, and are only visible when seen against the light and in motion. In Germany these minute insects are called „Augenstaub”, also „gefügelte Atomen”.

Four of the sixteen specimens above referred to were sent to me prepared for the microscope and mounted on a

glass slide in glycerin-gelatin, an excellent mode for the examination of such minute objects, so far as the observation of the general outline and of detached parts are concerned, the gummy solution rendering the parts more or less transparent. The action of the glycerin-gelatin, however, seems to destroy to a certain extent the colours of the insects. Another inconvenience of this mode of preservation is the fact that the short hairs and setae of the antennae and tarsi, also the spines of the tibiae are not always easily distinguishable. In the four species above named the short erect hairs of the eyes are curled and bent towards the facets.

I have been very greatly aided by Professor RITZEMA BOS, who has facilitated my investigation by adding for my guidance a paper entitled: „Revision of the Aphelininae of North-America”, published at Washington in 1895, by L. O. HOWARD, at present Chief, Bureau of Entomology, U. S. Departement of Agriculture.

Description of *Aspidiotiphagus Schoeversii*:

♀. Head broadly rotund-triangular viewed from in front, not abruptly narrowed posteriorly; vertex produced above the anterior part of the mesonotum, terminating in a point, its lateral margin bordered to the posterior extremity; face parallelsided, transverse; clypeus narrow; mandibles small; eyes pubescent, bearing large facets; lateral ocelli equidistant from each other and margin of eyes. Antennae inserted near clypeus, 8-jointed; scape long, slender; pedicellus large, longer than its apical width; funicular joints 1, 2 and 3 increasing in width, but about equal in length; club distinctly 3-jointed, 7 and 8 subequal in length, the apical joint pointed.

Thorax somewhat wider than head and abdomen; parapsides of mesoscutum narrow and parallel-sided posteriorly, broad towards tegulae; mesoscutellum broad, broadly rounded apically, with a bristle on each side; its scapulae longitudinally elongate and extending forward to widening of the parapsides.

Abdomen about as long as thorax, broadly sessile and broadly rounded at its apex, with the ovipositor slightly exerted, viewed from above; spiracular hairs on apical half of abdomen very long.

Forewing long, submarginal and marginal veins subequal in length; stigmal short, situated at half the wing length and exactly opposite to the termination of thickening of hinder margin of wing, this being also the widest point of the wing; cilia of wing surface rather sparse, a clear rounded space immediately below the stigma; marginal vein bristly (6 to 7 bristles); marginal cilia very long, longer than wing width, those on costal margin just beyond stigma nearly as long as those on hind margin. Hindwings with long marginal cilia and but one row of discal cilia on outer third.

Legs somewhat slender, terminated by 5-jointed tarsi with enlarged pulvillus; femora not thickened; tibiae spinose, spur of middle tibiae very slender, as long as the first tarsal joint.

Head nigrescent; vertex and frons bright flavous, ocelli brilliantly red; eyes dark; temples rufescent. Antennae nigrescent, basally rufescent. Thorax fuscous, mesoscutum and scutellum pale flavous. Wings with marginal vein fuscous and broad fuscous band extending directly across wing from marginal vein as a base. Abdomen, as far as the spiracles, partly brilliantly dark violet, towards the apex nigrescent. Legs pale with fuscous markings.

This very distinct species is certainly related to a remarkable degree with *Aspidiotiphagus citrinus* CRAW., the only representant of the genus *Aspidiotiphagus*, but differs, beyond its colouration, in many salient structural characters.

HOWARD gives a description of *Aspidiotiphagus citrinus* in „Insect Life”, bulletin of the U. S. Departement of Agriculture Vol. VI, No. 3, Washington 1894, which is reported to have been bred from various scale-insects. It was reared in the U. S. from *Aspidiotus aurantii* MASKELL, var. *citrinus*, from *Diaspis bromeliae* KERN. on *Ananasa sativa* and from *Aspidiotus ficus*, and in Italy it was bred from an *Aspidiotus* on *Acacia longifolia* and from *Diaspis rosae*.

In the in glycerin-gelatin mounted specimens the curious internal structure of the *Aphelininae*, which is called by BUGNION in his „Développement, etc., de l'Encyrtus fuscicollis”, the „mesophragma”, is seen to extend far back into the abdomen, much farther than with BUGNION's

Encyrtus. See fig. 2. The lower dotted line in fig. 2 represents the terebra.

EXPLANATION OF PLATE 13.

The whole of these figures are highly magnified.

Fig. 1. *Aspidiotiphagus Schoeversi*, female.

- » 2. Internal structure.
 - » 3. Head viewed from in front.
 - » 4. Antenna.
-